■ ICT-7A ■

User's Manual

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INTRODUCTION

LEAP ELECTRONIC, accumulated over 15 years experiences in electronic products' research and development, is a pioneering manufacturer in IC testers industry. The ICT-7A, desktop design, is a newly launched and best quality and multi-functions equipped product. It can be operated smoothly even lack of lightness condition. Moreover, the ICT-7A supports over hundred kinds of linear ICs, as well as offering the components such as, OP, OPTO, REG, SPECIAL FUNCTIONS DEVICE, TRANSISTOR ARRAY, etc.

The feature of ICT-7A such as built in "auto search & test" speeds to identify and test IC. In addition, this function design for continuously testing function is intelligently applied to detect defective ICs and their stability. All these strengths provide significantly conveniences for digital IC testers.

All the ICT-7A accumulated incalculable benefits are to be discovered as users utilize the value-added, multi-functions equipped tester. This is a best choice for the factories, R&D sections, maintenance departments, laboratories as well as academics because it really creates future with your business.

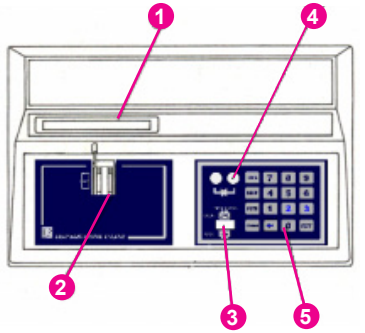
FEATURES

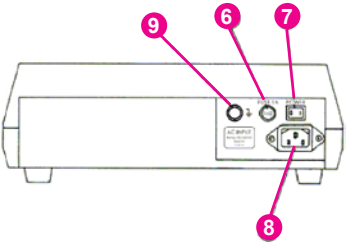
※ Reliable desktop design.
※ User's friendly set up and operates.
※ 16 X 1 character 8 X 5 dot matrix LCD display.
※ Most of the linear ICs in this market is tested.
※ High test speed at an average 0.8 second for one IC test.
※ Supporting linear IC series that is between 5V to 24V.
※ "AUTO" function key supports "auto search and test" function. User only to put the IC into the socket, no need to press any key, no need to process any other movements, the "auto search and test' will continue processing.
※ "SEARCH" function key can group the same function components utomatically.
※ Various "BUZZER" sounds to presents the test results "FAIL", or "PASS".

SPECIFICATIONS

DISPLAY :	16x1 character dot matrix LCD display
TEST SOCKET :	One position for 24 Pin IC socket
OPERATIONAL KEY :	6Function Key : TYPE , AUTO , BEEP , TEST , SEARCH ← 10Numeric Key : 0~9 Test Sorket , Double binding post
TEST VOLTAGE :	±5 V ~ ±24 V
ALARM :	Various tones for the test result
POWER SUPPLY :	110 ~ 220V AC , 50~60 Hz
OPERATING TEMPERATURE :	10°C ~ 40°C
STORAGE TEMPERATUR :	0°C ~ 50°C
DIMENSION :	33.5 x 30 x 10.5 (cm / W x H x D)
WEIGHT :	1.5 Kg (3.3 LB)

CONTROLS & INDICATORS





(1) Liquid Crystal Display ..... 16x1 character 8x5 dot matrix LCD display.
(2) 24Pin Test IC Socket
(3) LM317, 7xxx TEXT Socket
(4) Zener Text Socket
(5) Keyboard
(6) Fuse ..... 1A , protects tester from damage
(7) Power Switch ..... Power On or Off
(8) AC Receptacle ..... Plug power core in
(9) GND..... Ground

KEYS'INSTRUCTION

KEYS	INSTRUCTION
0 9	Numerical Keys Input IC numbers for test.
TEST	**Execution key** 1. Executes testing work as inputting a device number. 2. Repeats test.
TYPE	**IC series selection key** Switches selection "OP", "OPTO", "REG", "Ext 1", "Ext 2"
AUTO	**Auto test key** 1. Auto detects IC number 2. Auto test IC If change into new IC, the "auto search & test" will auto detect the IC, and continue to test. After entering into the auto test function, press any key to back to hand operation.
SEARCH	**Auto search key** 1. Search the same components in one series automatically. 2. After finding the components, press the TEST key to test them.
	Those two are used to test the ZENER components.
LM317	LM317 used only, please follow the instruction to put the components inside.
7XXX	78, 79 used only, please follow the instruction to put the components inside.
←	**Back space Key** Erases wrong number in the left side of ←
BEEP	BUZZERING switching key Switches BUZZER on/off

OPERATIONAL INSTRUCTIONS

1. OPERATIONAL PROCEDURES

STEP1.

Plug in AC power cord, then switch power on.
The black light of LCD is on and presents software version.
It starts self-test.

No system error found displays on the LCD :

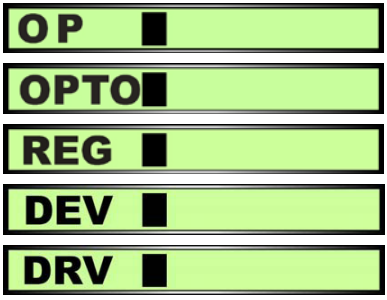
System error shows on the LCD if it is detected :

STEP2.

Auto search the IC number and test if an IC is on the socket.

STEP3.

Use [TYPE] to switch the selection of "OP", "OPTO", "REG", "Ext1", "Ext2" series ICs.



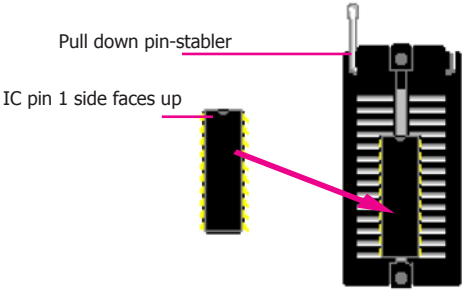
Θ Don't put any components on the SOCKET when the PC is turning on, otherwise, it will cause the damage of the components and the machine.

TESTING PROCEDURES

1. Normal components

STEP1.

Put IC on the socket and IC' s bottom line up with socket. Pin 1 side faces up.



STEP2.

Input the IC number such as OP LM324, an user types in IC number [3] [2] [4]

LCD display Input keys

STEP3.

Press, [TEST] ten the test works. Follow-up test Result is displayed on the LCD.

Pass test displays on the LCD.

Fail test displays on the LCD.

TEP4.

Repeat test by replacing a new IC,then press [TEST].

STEP5.

Re-type the IC's numbers for another test.

Note: "Pass" may also happen to some logic function compatible but different number's two ICs if their numbers are exchanged with each other to test.

2. 7xxx , LM217 & LM317 series devices

STEP1.

Put IC into Textool.

Please note the devices direction, put the words "7XXX " series upside. LMx17

The words "LMx17" downside.

If not, the machine will display failed information. Please restart the computer

STEP2.

nput the IC number. Such as the REG 7805

Input keys

STEP3.

Press [TEST] then the test works, Follow-up test result is displayed on the LCD.

STEP4.

Repeat test by replacing a new IC, then press [TEST]

3. Zener serial devices

STEP1.

Put Zenerinto Textool.(NOTE+/- Polarity)

STEP2.

Input keys

STEP3.

Press [TEST], the system will start to test Zener, the result as follow:

STEP4.

Replace next testing Zener, then press, [TEST] the system will repeat to test.

STEP5.

Re-type the Zener's number for another test.

SEARCHING UNKNOWN IC NUMBER

Statements

1. **When the IC number is unknown, you can use this function to do the test.**
2. **For the same serial IC, it can do continues search.**

STEP1.

Put IC into SOCKET

STEP2.

press, [SEARCH] the system will auto detect and shows:

If there are no same serial ICs, it shows:

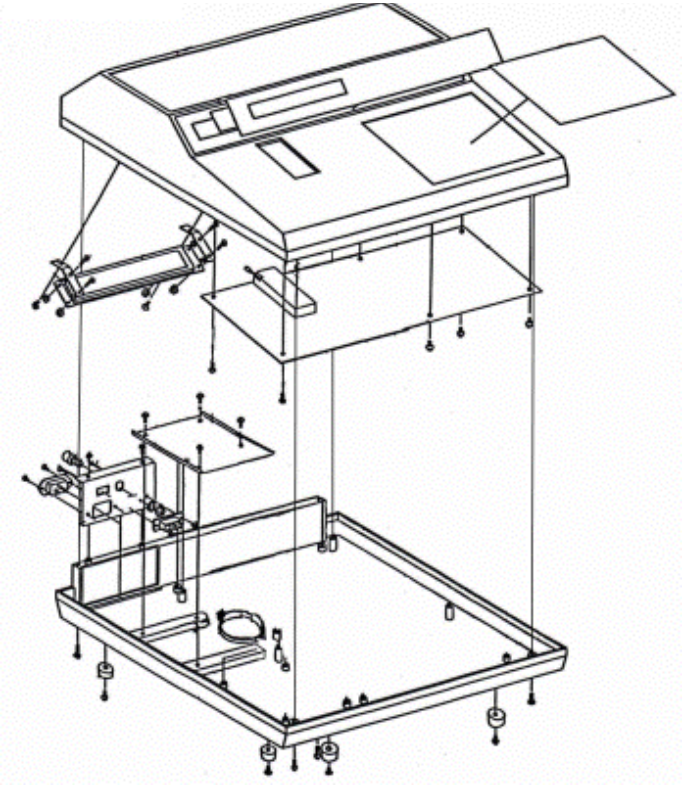
STEP3.▫

Press [TEST] to test IC's situation.

TROUBLE SHOOTING

SITUATION	REASONS	HOW
• LCD's dark backlight. • No message on the LCD • BUZZER no sound • No response from key board	▪ Power off ▪ Loose AC power cord ▪ Burned fuse	▫ Reset Power ▫ Tighten AC power cord ▫ Replace fuse
	▪ Loose LCD connector ▪ Power supply damaged	▫ Tighten LCD connector & plug ▫ Contac regional distributor for assistance
• BUZZER no sound . • LCD's back light is on • LCD message appears • Response by any keys on the board	▪ BUZZER off	▫ Press BEEP to switch
	▪ BUZZER damaged ▪ Components Q11,R3 damaged	▫ Replace SP1 ▫ Replace Q3, R3,R2.
• LCD appears irregular • LCD backlight is dark • Buzzer is no problem.	▪ Loose LCD flat cable ▪ Damaged LCD's unit	▫ Tighten LCD's flat cable ▫ Replace LCD's unit
• IC test unstable	▪ Bad connection between IC and socket ▪ SOCKET unclear or damaged ▪ Defective IC	▫ Re-put IC, and pull down pin-stabler ▫ Replace SOCKET. ▫ Replace another IC
	▪ Loose CPU ▪ Unstable internal circuit	▫ Check U1 ▫ Re-put U1 ▫ Connect local distributor for assistance
• Some keys no response	▪ Key board damaged	▫ Replace a keyboard ▫ Replace U17

TOTAL ASSEMBLY



KEY CODE TABLES

OP (OPERATIONAL AMPLIFIERS, COMPARATORS)		
OPERATIONAL AMPLIFIERS		
KEY CODE	IC TYPE	NOTE
101	LM101	Single Unit
107	LM107	
108	LM108	
118	LM118	
124	LM124	
148	LM148	
158	LM158	
201	LM201	
207	LM207	
208	LM208	
218	LM218	
224	LM224	
248	LM248	
258	LM258	
301	LM301	
307	LM307	
308	LM308	
310	LM310	
318	LM318	
324	LM324	
348	LM348	
358	LM358	
1458	LM1458	
2900	LM2900	
2902	LM2902	
2904	LM2904	
3900	LM3900	
660	LMC660	
358	CA358	
3130	CA3130	
3140	CA3140	
3160	CA3160	
3240	CA3240	
3260	CA3260	
3401	CA3401	
22	TL022	
61	TL061	

KEY CODE	IC TYPE	NOTE
62	TL062	
64	TL064	
71	TL071	
72	TL072	
74	TL074	
81	TL081	
82	TL082	
84	TL084	
94	TL094	
3303	MC3303	
3403	MC3403	
3503	MC3503	
4004	MC34004	
5532	NE5532	
5534	NE5534	
347	LF347	
351	LF351	
353	LF353	
355	LF355	
356	LF356	
357	LF357	
411	LF411	
412	LF412	
7611	ICL7611	
7621	ICL7621	
7641	ICL7641	
7642	ICL7642	
648	AD648	
711	AD711	
712	AD712	
1013	LT1013	
1014	LT1014	
4558	RC4558	
741	uA741	
747	uA747	
748	uA748	
7	OP07	
27	OP27	

KEY CODE	IC TYPE	NOTE
37	OP37	
42	OP42	
90	OP90	
97	OP97	
290	OP290	
490	OP490	
252	TLC252	
272	TLC272	
124	LP124	
7324	HA17324	
451	uPC451	
4082	C4082	
COMPARATORS		
139	LM139	
193	LM193	
239	LM239	
293	LM293	
2901	LM2901	
2903	LM2903	
339	LM339	
3302	LM3302	
393	LM393	
OPTO (OPTOCOUPLERS)		
25	4N25	
26	4N26	
27	4N27	
28	4N28	
29	4N29	
32	4N32	
33	4N33	
35	4N35	
36	4N36	
37	4N37	
38	4N38	
45	4N45	

OPTO (OPTOCOUPLERS)		
46	4N46	
111	TIL 111	
116	TIL 116	
1111	H11A1	
1121	H11B1	
1131	H11D1	
1132	H11D2	
1133	H11D3	
1134	H11D4	
75	CNY75	
2	MCT2	
817	PC817	
827	PC827	
837	PC837	
847	PC847	
8271	K827P	
8471	K847P	
REG (VOLTAGE REGULATORS)		
7805	uA7805	(LM2930-5.0 , LM2931-50 , LM2940C-5.0)
7806	uA7808	
7809	uA7809	
7810	uA7810	
7812	uA7812	
7815	uA7815	
7818	uA7818	
7824	uA7824	
7905	uA7905	
7908	uA7908	
7912	uA7912	
7915	uA7915	
7924	uA7924	
217	LM217	
317	LM317	
9999	Zener	

DEV (SPECIAL FUNCTIONS DEVICE)		
555	NE555	
556	NE556	
4016	4016	
4066	4066	
723	LM723	
DRV (TRANSISTOR ARRAY)		
2001	ULN2001	
2003	ULN2003	
2004	ULN2004	
2005	ULN2005	

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